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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,487	09/02/2004	Kazuhisa Senda	121036-0070	2843

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Michael S Gzybowski
Butzel Long
Suite 300
350 South Main Street
Ann Arbor, MI 48104

EXAMINER	
O HERN, BRENT T	

ART UNIT	PAPER NUMBER
1772	

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/506,487	SENDA ET AL.	
	Examiner	Art Unit	
	Brent T. O'Hern	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 October 2006 has been entered.

Claims

2. Claims 1-15 are pending.

WITHDRAWN OBJECTIONS

3. The objection to the title of record in the Office Action mailed 26 June 2006, page 2, paragraph 4, has been withdrawn due to Applicant's amended title in the Paper filed 26 September 2006.

4. The objection to claim #15 of record in the Office Action mailed 26 June 2006, page 2, paragraph 5, has been withdrawn due to Applicant's amendment in the Paper filed 26 September 2006.

WITHDRAWN REJECTIONS

5. The 35 USC 103 rejections of claims 1-3, 5-6, 8-9 and 14-15 as being unpatentable over Farnam (US 4,463,704) in view of Kusakabe et al. (US 5,986,014), of record in the Office Action mailed 26 June 2006, page 3, paragraph 6, have been withdrawn due to Applicant's amendments in the Paper filed 26 September 2006.

6. The 35 USC 103 rejections of claims 4 and 10 as being unpatentable over Farnam (US 4,463,704) in view of Kusakabe et al. (US 5,986,014) and DeCato et al. (US 6,444,740), of record in the Office Action mailed 26 June 2006, page 6, paragraph 7, have been withdrawn due to Applicant's amendments in the Paper filed 26 September 2006.

7. The 35 USC 103 rejections of claims 7 and 11-13 as being unpatentable over Farnam (US 4,463,704) in view of Kusakabe et al. (US 5,986,014), DeCato et al. (6,444,740) and Kawamura (US 5,684,110), of record in the Office Action mailed 26 June 2006, page 7, paragraph 8, have been withdrawn due to Applicant's amendments in the Paper filed 26 September 2006.

NEW OBJECTIONS

Specification

8. The amendment filed 26 September 2006 is objected to under 35 U.S.C. 132(a) because it introduces **new matter** into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in amended claim 1, line 7 Applicant claim "R^4 is an alkyl group". This limitation is not disclosed on p. 6 of Applicant's Specification. Applicant does disclose on p. 5, ll. 12-25 wherein R can be an alkyl group, however, this disclosure is not for R^4.

Applicant is required to cancel the new matter in the reply to this Office Action.

NEW REJECTIONS

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the **written description** requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 1, line 7 Applicant claims "R^4 is an alkyl group". This limitation is not disclosed on p. 6 of Applicant's Specification. Applicant does disclose on p. 5, ll. 12-25 wherein R can be an alkyl group, however, this disclosure is not for R^4.

35 U.S.C. 103(a) Rejections

10. Claims 1-3, 5-6, 8-9 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnam (US 4,463,704) in view of Kusakabe et al. (US 5,986,014).

Regarding claims 1and 15 Farnam ('704) teaches a gasket *(Abstract, l. 2)*, which comprises a cured product layer *(Abs., l. 17 "cure the coating")* and a metal plate or resin plate *(col. 3, l. 26 "polymeric material", a resin)*, the cured product layer being provided on at least one surface of the resin plate *(col. 8, ll. 46-48 "applied to top and bottom surfaces" and Abs., ll. 4-5 and 17)*, however, Farnam ('704) fails to teach of a composition comprising an acrylic polymer having at least one alkenyl group capable of

undergoing hydrosilylation reaction by copolymerization of an acrylic acid ester monomer and a compound as a second monomer represented by the general formula:

$CH_2=CR^1-R^4-CR^1=CH_2$

wherein R^1 is a hydrogen atom or a methyl group and R^4 is an alkyl group of C_1-C_{20} which may have at least one ether bond;

a hydrosilyl group-containing compound; and

a hydrosilylation catalyst as essential components.

However, Kusakabe ('014) teaches a composition comprising an acrylic polymer having at least one alkenyl group capable of undergoing hydrosilylation reaction *(col. 11, ll. 43-45)*, at least one alkenyl group capable of undergoing hydrosilylation reaction by copolymerization of an acrylic acid ester monomer and a compound as a second monomer represented by the general formula:

$CH_2=CR^1-R^4-CR^1=CH_2$

wherein R^1 is a hydrogen atom or a methyl group R^4 is an alkyl group of C_1-C_{20} which may have at least one ether bond *(See col. 5, l. 59 to col. 6, l. 33 wherein Applicant's left R^1 is equivalent to Kusakabe's R^3 and right R^1 which is equivalent to Kusakabe's R^6 which are a hydrogen or methyl group and explained in col. 5, ll. 63-67 and see col. 8, ll. 53-64 wherein Applicant's R^4 is equivalent to Kusakabe's R^{13} and R^{14} when R^{13} has at least one ether bond and R^{14} is an alkyl group, thus an alkyl group of C_1-C_{20});*

wherein the second monomer is one of 1,5-hexadiene, 1,7-octadiene and 1,9-decadiene *(col. 12, ll. 56-60);*

a hydrosilyl group-containing compound *(col. ,11, l. 46)* and a hydrosilylation catalyst as essential components *(col. 14, ll. 49-50)* for the purpose of providing good depth curability without foaming *(col. 14, ll. 47-50)*.

Therefore it would have been obvious to one having ordinary skill in the art at the time applicants' invention was made to substitute the composition of Farnam ('704) with the well known acrylic polymer as described above in order to provide gaskets with good depth curability without foaming as taught by Kusakabe ('014).

The phrase "wherein the second monomer reacts at a final stage of the polymerization reaction or after completion of the reaction of the acrylic acid ester monomer in the synthesis of acrylic polymers by living radical polymerization" in claim 15, ll. 1-4 are **process limitations** in a product claim and hence not given any patentable weight since patentability of a product does not depend on its method of production *(see MPEP § 2173.05(p))*.

Regarding claim 2, Farnam ('704) fails to teach a gasket wherein the component of the composition is a liquid acrylic polymer having a number average molecular weight Mn of 500 or more and a molecular weight distribution (Mw/Mn) of 1.8 or less.

However, Kusakabe ('014) teaches a gasket wherein the component of the composition is a liquid acrylic polymer having a number average molecular weight Mn of 500 or more *(See col. 11, ll. 49-50 wherein the Mw is from 500 to 50,000 and col. 3 ll. 64-65 wherein Mw/Mn = 1.1 – 1.5, thus making Mn from 333 to 45,455.)* and a molecular weight distribution (Mw/Mn) of 1.8 or less *(col. 3, ll. 64-65)* for the purpose of providing sufficient physical properties and not too viscous *(col. 11, ll. 52-57)*.

Therefore it would have been obvious to one having ordinary skill in the art at the time applicants' invention was made to substitute Farnam ('704) with the well known acrylic polymer with Mn and Mw/Mn as taught by Kusakabe ('014) in order to provide a polymer that has sufficient physical properties and not too viscous.

Regarding claim 3, Farnam ('704) teaches a gasket wherein the cured product layer has a film thickness of 1-500 μm *(col. 3, ll. 44-47 "any desired thickness" and col. 9, ll. 18-21, 0.0005 – 0.005 in. which equals 12.7 – 127 μm)*.

Regarding claim 5, Farnam ('704) teaches a gasket wherein the composition is directly applied to an adhesive-coated metal plate or resin plate *(col. 8, ll. 46-48 "adhesive coatings" and "applied to the top and bottom surfaces of the gasket part" and Abs., ll. 4-5 "coated with a liquid dispersion of polymer or polymers")* and cured *(Abs., l. 17, "cure the coating")*.

Regarding claims 6, 8 and 9, Farnam ('704) teaches a gasket which comprises at least one of an automobile engine cylinder head gasket, an engine oil pan gasket and an engine intake-exhaust manifold gasket *(col. 1, ll. 30-35 "pan gasket")*.

Regarding claim 14, Farnam ('704) teaches a gasket the gasket discussed above, however, fails to expressly disclose wherein the second monomer is one of 1,5-hexadiene, 1,7-octadiene and 1,9-decadiene.

However, Kusakabe ('014) teaches wherein the second monomer is one of 1,5-hexadiene, 1,7-octadiene and 1,9-decadiene *(col. 12, ll. 56-60)* for the purpose of providing good depth curability without foaming *(col. 14, ll. 47-50)*.

Therefore it would have been obvious to one having ordinary skill in the art at the time applicants' invention was made to substitute the composition of Farnam ('704) with the well known monomer as described above as taught by Kusakabe ('014) in order to provide gaskets with good depth curability without foaming.

11. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnam (US 4,463,704) in view of Kusakabe et al. (US 5,986,014) and DeCato et al. (US 6,444,740).

Regarding claim 4, Farnam ('704) and Kusakabe ('014) teach the gasket as described above, however, fail to teach a gasket wherein the cured product layer has a surface hardness of 45 or less. However, DeCato ('740) teaches the cured product layer's surface hardness can vary depending on the additives *(col. 5, ll. 46-51)*. Furthermore, DeCato ('740) teaches the claimed surface hardness of 45 or less *(col. 15, Table 7a, "Comp. 5")*.

Therefore it would have been obvious to one having ordinary skill in the art at the time applicants' invention was made to modify the cured product of surface hardness of Farnam ('704) and Kusakabe ('014) since DeCato ('740) teaches that silicone compositions include a plasticizer when it is desirable for the specific surface hardness of the cured product layer depending on the desired surface hardness. Furthermore, DeCato ('740) teaches the claimed surface hardness of the cured product layer of 45 or less.

Regarding claim 10, Farnam ('704) teaches a gasket which comprises at least one of an automobile engine cylinder head gasket, an engine oil pan gasket and an engine intake-exhaust manifold gasket *(col. 1, ll. 30-35 "pan gasket")*.

12. Claims 7 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnam (US 4,463,704) in view of Kusakabe et al. (US 5,986,014), DeCato et al. (6,444,740) and Kawamura (US 5,684,110).

Farnam ('704), Kusakabe ('014) and DeCato ('740) teach the gasket as described above. However, they fail to expressly teach a gasket wherein the cured product is provided on a resin plate that has a softening point of 100 °C or more.

Kawamura ('110) teaches resins that have a softening point of 100 °C or more *(col. 6, ll. 52-55 "softening point from 5 °C to 200 °C")* for the purpose of providing a gasket to undergo a very slow cure *(col. 6, ll. 3-4)* for having acceptable storage stability *(col. 6, ll. 41-42)*.

Therefore it would have been obvious to one having ordinary skill in the art at the time applicants' invention was made to provide a resin plate of Farnam ('704), Kusakabe ('014) and DeCato ('740) with a softening point of 100 °C or more as taught by Kawamura ('110) in order to provide a gasket having acceptable storage stability as described above.

ANSWERS TO APPLICANT'S ARGUMENTS

13. In response to Applicant's argument *(p. 10, para. 3 of Applicant's Paper filed 26 September 2006)* that Applicant's amended independent claim #1, with the limitation of R^4 is being an "alkyl" instead of an organic *(claim 1, l. 7)* overcomes the 103 rejection, it

is firstly noted that this amendment adds new matter. Nowhere on p. 6 of Applicant's specification or anywhere else within the specification does Applicant disclose R^4 as being an "alkyl". It is acknowledged that on p. 5, ll. 12-25 Applicant does define R as being an alkyl group, however, nowhere within this passage is R defined as being equivalent to R^4. Thus, Applicant has added new matter.

Furthermore, Kusakabe ('014) teaches a composition comprising an acrylic polymer having at least one alkenyl group capable of undergoing hydrosilylation reaction *(col. 11, ll. 43-45)*, at least one alkenyl group capable of undergoing hydrosilylation reaction by copolymerization of an acrylic acid ester monomer and a compound as a second monomer represented by the general formula:

$CH_2=CR^1-R^4-CR^1=CH_2$

wherein R^1 is a hydrogen atom or a methyl group R^4 is an alkyl group of C_1-C_{20} which may have at least one ether bond *(See col. 5, l. 59 to col. 6, l. 33 wherein Applicant's left R^1 is equivalent to Kusakabe's R^3 and right R^1 which is equivalent to Kusakabe's R^6 which are a hydrogen or methyl group and explained in col. 5, ll. 63-67 and see col. 8, ll. 53-64 wherein Applicant's R^4 is equivalent to Kusakabe's R^{13} and R^{14} when R^{13} has at least one ether bond and R^{14} is an alkyl group, thus an alkyl group of C_1-C_{20}).*

14. In response to Applicant's assertion *(p. 12, para. 1 of Applicant's Paper filed 26 September 2006)* that DeCato ('740) and Kawamura ('110) do not address or overcome the distinctions between Applicant's invention and Kusakabe ('014), it is noted that Applicant's assertion is an empty assertion since Applicant has not precisely addressed any claimed limitation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571) 272-0496. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-2172. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTO

Brent T O'Hern
Examiner
Art Unit 1772
December 6, 2006

NASSER AHMAD 12/6/06
PRIMARY EXAMINER